



September 6, 2001

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1. (Twice Amended) A driving unit of a welding equipment provided with a force application shaft that is driven by a motor, comprising:

a screw shaft coaxially fixed with a rotary shaft of the motor;

a nut fixed with the force application shaft and threadably engaged with a screw of the screw shaft;

a stabilizing mechanism engaging the force application shaft to prevent rotation thereof;

an elastic body disposed on the axis of the force application shaft through which the force exerts; and

an electromagnetic brake disposed on the rotary shaft of the motor,

whereby a rotary force output from the rotary shaft of the motor is converted into a reciprocating motion of the force application shaft which in turn applies a force to the welding equipment.

Sub C
3. (Amended) A driving unit of a welding equipment provided with a force application shaft that is driven by a motor, comprising:

a screw shaft coaxially fixed with a rotary shaft of the motor;

a nut fixed with the force application shaft and threadably engaged with a screw of the screw shaft;

a stabilizing mechanism engaging the force application shaft to prevent rotation thereof;

whereby a rotary force output from the rotary shaft of the motor is converted into a reciprocating motion of the force application shaft which in turn applies a force to the welding equipment; and

wherein the screw shaft is substantially integrally provided on the rotary shaft of the motor by boring a closed bore hole at an output side of the rotary shaft of the motor, and inserting one end of the screw shaft into the closed bore hole.

4. (Twice Amended) A driving unit of a welding equipment provided with a force application shaft that is driven by a motor, comprising:

a screw shaft coaxially fixed with a rotary shaft of the motor;

a nut fixed with the force application shaft and threadably engaged with a screw of the screw shaft, an outer diameter of the nut being the same as or smaller than an outer diameter of the force application shaft;

a stabilizing mechanism engaging the force application shaft to prevent rotation thereof; and

whereby a rotary force output from the rotary shaft of the motor is converted into a reciprocating motion of the force application shaft which in turn applies a force to the welding equipment.

wherein the screw shaft is substantially integrally provided on the rotary shaft of the motor by rendering the rotary shaft of the motor hollow to form a hollow portion and having the screw shaft penetrate the hollow portion to fix the screw shaft to the hollow portion.

5. (Amended) A driving unit of a welding equipment provided with a force application shaft that is driven by a motor, comprising:

a screw shaft coaxially fixed with a rotary shaft of the motor, the screw shaft being substantially integrally

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provided on the rotary shaft by fixing the screw shaft to the rotary shaft of the motor utilizing a friction force;

a nut fixed with the force application shaft and threadably engaged with a screw of the screw shaft; and

a stabilizing mechanism engaging the force application shaft to prevent rotation thereof,

wherein a rotary force output from the rotary shaft of the motor is converted into a reciprocating motion of the force application shaft which in turn applies a force to the welding equipment.

12. (Twice Amended) A driving unit of a welding equipment provided with a force application shaft that is driven by a motor, comprising:

a screw shaft coaxially fixed with a rotary shaft of the motor;

a nut fixed with the force application shaft and threadably engaged with a screw of the screw shaft;

a stabilizing mechanism engaging the force application shaft to prevent rotation thereof;

a driven part provided on the rotary shaft of the motor or the screw shaft and positioned between the rear of a body of the motor and the front of a position detector for transmitting torque of the motor; and

a manual operating driving part positioned eccentrically from the screw shaft for transmitting a turning torque to the driven part,

wherein a rotary force output from the rotary shaft of the motor is converted into a reciprocating motion of the force application shaft which in turn applies a force to the welding equipment.